ELSEVIER

Performance Evaluation 27&28 (1996) ix–xii

PERFORMANCE EVALUATION
An International Journal

Contents

Editorial vii

Session 1. Opening

M. Telek and A. Pfening
Performance analysis of Markov regenerative reward models 1

M. Greenwald
Practical algorithms for self scaling histograms or better than average data collection 19

Session 2. ATM Networks

H. Shimonishi, T. Takine, M. Murata and H. Miyahara
Performance analysis of fast reservation protocol in ATM networks with arbitrary topologies 41

K. Laevens and H. Bruneel
Discrete-time queueing models with feedback for input-buffered ATM switches 71

N. Bjorkman, A. Latour-Henner, A. Miah, S. Crosby, I. Leslie, M. Davey, R. Russell and F. Toomey
Exploring the queueing behaviour of ATM switches 89

Session 3A. Queueing Theory I

D.H.J. Epema
Joint queue-lengths and sojourn-time distributions in a general preemptive feedback queue 99

L.A. Kulkarni and S.-Q. Li
Transient behaviour of queueing systems with correlated traffic 117

P.S. Ansell, K.D. Glazebrook and I. Mitrani
Server allocation subject to variance constraints 147

S. Robert and J.-Y. Le Boudec
On a Markov modulated chain exhibiting self-similarities over finite timescale 159

Session 3B. Systems and Architecture I

H. Levy and R.J.T. Morris
Should caches be split or shared? Analysis using the superposition of bursty stack depth processes 175

J.A. Rivers and E.S. Davidson
Performance issues in integrating temporality-based caching with prefetching 189

W. Mao and R.H. Saavedra
The limits and effectiveness of data prefetching on scalable multiprocessors 209

T. Johnson
An analytical performance model of robotic storage libraries 231

Session 4. Parallel and Distributed Systems I

E.W. Parsons and K.C. Sevcik
Benefits of speedup knowledge in memory-constrained multiprocessor scheduling 253

M.S. Squillante, F. Wang and M. Papaefthymiou
Stochastic analysis of gang scheduling in parallel and distributed systems 273

Session 5. Data Traffic Measurement

R.L. Carter and M.E. Crovella
Measuring bottleneck link speed in packet-switched networks 297

A.J. Ganesh
Bias correction in effective bandwidth estimation 319

Session 6. Wireless Networks

S. Choi and K.G. Shin
Centralized wireless MAC protocols using slotted ALOHA and dynamic TDD transmission 331

J.M. Capone and I. Stavrakakis
Achievable QoS and scheduling policies for integrated services wireless networks 347

Session 7A. Communications

D.D. Tjhie and H. Rzehak
Analysis of discrete-time TES/G/1 and TES/D/1-K queueing systems 367

J.P.C. Blanc and L. Lenzini
Analysis of communication systems with timed token protocols using the power-series algorithm 391

E. Gelenbe, X. Mang and R. Önvural
Diffusion based statistical call admission control in ATM 411

S. Borst and D. Mitra
Optimal connection admission control in ATM networks 437

Session 7B. Systems and Architecture II

J. Myllymaki and M. Livny
Efficient buffering for concurrent disk and tape I/O 453

K.-P. Huber, M.R. Berthold and H. Szczerbicka
Analysis of simulation models with fuzzy graph based metamodeling 473

A. Pfening, S. Garg, A. Puliafito, M. Telek and K.S. Trivedi
Optimal software rejuvenation for tolerating soft failures 491

L.D. Barchett, A. Banerji, J.M. Tracey and D.L. Cohn
Problems using MD5 with IPv6 507

Session 8. Parallel and Distributed Systems II

T.B. Brecht and K. Guha
Using parallel program characteristics in dynamic processor allocation policies 519

A.J. Bennett, T. Field and P. Harrison
Modelling and validation of shared memory coherency protocols 541

Session 9. Petri Nets

C. Lindemann and G.S. Shedler
Numerical analysis of deterministic and stochastic Petri nets with concurrent deterministic transitions 565

L.M. Malhis and W.H. Sanders
An efficient two-stage iterative method for the steady-state analysis of Markov regenerative stochastic Petri net models 583

Session 10. State-space Methods

M. Meo, E. de Souza e Silva and M. Ajmone Marsan
Efficient solution for a class of Markov chain models of telecommunication systems 603

P. Heidelberger, J.K. Muppala and K.S. Trivedi
Accelerating mean time to failure computations 627

Session 11. Queueing Theory II

D. Kofman and U. Yechiali
Polling systems with station breakdowns 647

D. Artiges and P. Nain
Upper and lower bounds for the multiplexing of multiclass Markovian on/off sources 673

O.J. Boxma
Fluid queues and regular variation 699

Author Index 713

Subject Index 715